

Remarks

Upon entry of the foregoing amendment, claims 1-26 are pending in the application, with claims 1, 7, 13, and 19 being the independent claims. Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 13-18 stand rejected under 35 U.S.C. 103(a) as allegedly being obvious over U.S. Patent No. 6,792,250 to Zarubin (hereinafter "Zarubin") in view of U.S. Patent Publication No. 2007/0126937 to Utsunomiya *et al.* (hereinafter "Utsunomiya")
Applicants traverse this rejection based on the discussion below.

As discussed in Applicant's prior reply of 5/23/07, Applicant's claim 13 recites a *receiver portion* for suppressing an image channel, including, in part:

an attenuator having an attenuation at said desired channel and said image channel both determined by an attenuation of said image channel at an output of said bandpass filter. (See, Claim 13, emphasis added)

At paragraph 3, the Office Action admits that the non-analogous transmitter in Zarubin does not teach the italicized claim feature. The Office Action, then cites the new reference Utsunomiya, and describes Utsunomiya as a" the UHF/VHF tuner receives a radio frequency (RF) television signal that includes a plurality of channels." (See, Office Action) Curiously, the Office Action does not affirmatively indicate that the reference Utsunomiya teaches the missing claim feature recited above, but does cite to paragraph,

page 1, paragraph 0005. Upon careful review, the mentioned paragraph 0005 in Utsunomiya, makes no mention of Applicant's italicized claim features that were highlighted above. The mentioned paragraph 0005 is reproduced below, as further proof that Utsunomiya does not teach the italicized claim feature discussed above. Para [0005] of Utsunomiya, recites:

In general, televisions include circuits to demodulate radio frequency television signals to generate video and sound signals. The video and sound signals provide the information necessary to form the television picture and sound, respectively. An ultrahigh frequency ("UHF")/very high frequency ("VHF") tuner is one type of circuit found in television receivers. In general, the UHF/VHF tuner receives a radio frequency ("RF") television signal that includes a plurality of channels. The channels are modulated on a carrier frequency. The carrier frequency may be in the UHF spectrum or the VHF spectrum. The television is set or tuned to receive a specific channel (e.g., channel 2). The U/V tuner processes the RF television signal based on the channel selected, and generates an intermediate frequency ("IF") signal. In the United States, the intermediate frequency, used in television receivers, is set to a frequency of 45.75 Mhz.

(See, Utsunomiya, para 0005)

Based on the above, it is clear that para 0005 of Utsunomiya does not teach a *receiver portion* for suppressing an image channel, including, in part: *an attenuator* having an attenuation *at said desired channel and said image channel both* determined by an attenuation of said image channel at an output of said bandpass filter, as recited in Applicant's claim 13. Further, an electronic search of Utsunomiya, produced no results for the search "attenuator", or any variation thereof. Based on the discussion, it is clear that Utsunomiya does not teach the missing claim features italicized above. Accordingly, the combination of Zarubin and Utsunomiya does not teach each and every feature of claim 13, and therefore does not meet the requirements of *prima facie* obviousness. (See MPEP 2143).

Further, the United States Supreme Court, in *KSR International vs. Teleflex, Inc.*, No. 04-1350 (U.S. April, 30, 2007), ruled on the requirements for obviousness analysis under 35 U.S.C. 103(a). The most recent MPEP (8th Edition) includes guidelines for §103 rejections, and recites:

The key to supporting any rejection under 35 U.S.C. 103 is the ***clear articulation*** of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made ***explicit***. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that “***[R]ejections on obviousness cannot be sustained by mere conclusory statements***; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”” *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396.

(See, MPEP, 2141, sec III, 8th Edition)

In other words, *KSR* and the latest MPEP guidelines obviousness rejections be supported by ***explicit*** reasoning and/or evidence, and cannot be mere conclusory statements. Applicants' assert that the mere mention of Utsunomiya as recited in the Office Action, is only conclusory, and therefore insufficient to support a case of *prima facie* obviousness, based on the holdings of *KSR* and the MPEP guidelines on obviousness that are discussed above. Further, even absent the guidelines, Utsunomiya still does not fill in the missing teachings of Zarubin as discussed above, and therefore the combination does not teach all of the elements of Applicants' claim.

Further, it is again noted that the primary reference, Zarubin, is a ***transmitter reference***. Whereas, Applicants' claim 13 recites a ***receiver portion***. Transmitter and receivers are substantially and fundamentally different from each other. Accordingly, Zaruban is non-analogous art and should not be cited against, or combined with, receiver related teaching. (See MPEP 2141.01) This was noted in the Applicant's prior reply, but not addressed in the most recent Office Action, for some reason.

Based on the discussion above, Applicants request that the rejection under 35 § U.S.C. 103 of claim 13 be reconsidered and withdrawn, and that claim 13 be passed to allowance. Claims 14-18 depend directly or indirectly from claim 13, and therefore are patentable for being dependent on an allowable base claim, in addition to their own patentable features.

Claims 1-2, 5-12, 19, 21, and 23-26 stand rejected under 35 U.S.C. 103(a) as allegedly being obvious over U.S. Patent No. 6,177,964 to Birleson (hereinafter "Birleson") in view of Zarubin, and further in view of Utsunomiya. Applicants traverse this rejection based on the discussion below.

Independent claim 1 includes the feature of *attenuating the input signal, including the desired channel and the image channel, by the stopband attenuation of the bandpass filter to provide an attenuated signal.* (*See* claim 1) At paragraph 4, the Office Action admits that the non-analogous transmitter in Zarubin does not teach the italicized claim feature. The Office Action, then cites the new reference Utsunomiya, and describes Utsunomiya as a "the UHF/VHF tuner receives a radio frequency (RF) television signal that includes a plurality of channels." (*See*, Office Action) As discussed above for claim 13, upon careful review, Utsunomiya does not teach or suggest the italicized claim feature. Specifically, Utsunomiya does not teach or suggest *attenuating the input signal, including the desired channel and the image channel, by the stopband attenuation of the bandpass filter* for the reasons discussed above in regards claim 13. Birleson does not cure the defects of Zarubin or Utsunomiya, nor does the Office Action suggest this.

Likewise, independent claim 7 includes the feature of *generating an image cancellation signal from the first IF signal, the image cancellation signal having an*

amplitude at the frequencies of the desired channel and the image channel substantially equal to the amplitude of the image channel in the first filtered IF signal and a phase that is offset by approximately 180 degrees from the image channel in the first filtered IF signal. (See claim 7) As admitted in the Office Action, Zarubin does not teach or suggest generating *the image cancellation signal having an amplitude at the frequencies of the desired channel and the image channel substantially equal to the amplitude of the image channel*. Utsunomiya does cure the defects of Zarubin for the same reasons mentioned above for claim 13. Birleson does not the cure the defects of Zarubin and Utsunomiya, nor does the Office Action suggest this.

Likewise, independent claim 19 includes the feature of *an image cancellation circuit, coupled in parallel with said bandpass filter, having a passband response at said image channel and said desired channel that is substantially equal in amplitude and opposite in phase of a response of said bandpass filter at said image channel. (See, claim 19)* As admitted in the Office Action, Zarubin does not teach or suggest *an image cancellation circuit having a passband response at said image channel and said desired channel that is substantially equal in amplitude and opposite in phase of a response of said bandpass filter at said image channel*. Utsunomiya does cure the defects of Zarubin for the same reasons mentioned above for claim 13. Birleson does not the cure the defects of Zarubin and Utsunomiya, nor does the Office Action suggest this.

Accordingly, Birleson in view of Zarubin does not teach each and every feature of independent claims 1, 7, and 19, and therefore does not meet the requirements of *prima facie* obviousness. (*See, MPEP 2143*) Further, claims 2 and 5-6 depend directly or indirectly from independent claim 1, and therefore are allowable for being dependent on an allowable base claim in addition to their own patentable features. Further, claims 8-12

depend directly or indirectly from independent claim 7, and therefore are allowable for being dependent on an allowable base claim, in addition to their own patentable features. Further, claims 21 and 23-26 depend directly or indirectly from independent claim 19, and therefore are allowable for being dependent on an allowable base claim in addition to their own patentable features.

Claims 3-4, 20, and 22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Birleson in view of Zarubin, in view of Utsunomiya, and further in view of Applicant's admitted prior art (AAPA, pages 1-3). Applicants traverse below.

Claims 3-4 depend directly or indirectly from independent claim 1, which is patentable over Birleson in view of Zarubin in view of Utsunomiya based on the discussion above. AAPA does not cure the defects of Birleson in view of Zarubin in view of Utsunomiya in regards to claim 1. Accordingly, claims 3-4 are patentable over Birleson in view of Zarubin in view of Utsunomiya and further in view of AAPA, for being dependent on an allowable base claim in addition to their own patentable features.

Claims 20 and 22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Birleson in view of Zarubin in view of Utsunomiya, and further in view of AAPA. Claims 20 and 22 depend directly or indirectly from independent claim 19, which is patentable over Birleson in view of Zarubin in view of Utsunomiya, based on the discussion above. AAPA does not cure the defects of Birleson in view of Zarubin in view of Utsunomiya, in regards to claim 19. Accordingly, claims 20 and 22 are patentable over Birleson in view of Zarubin and further in view of AAPA, for being dependent on an allowable base claim in addition to their own patentable features.

Further, claim 22 includes the feature of an attenuator having an attenuation that approximately matches an attenuation of said bandpass filter *at said image channel and*

said desired channel. As discussed above in regards to claim 13, the combination of Zarubin in view Utsunomiya does not teach or suggest this feature. Neither Birleson nor AAPA cures this defect. Accordingly, claims 22 is patentable over Birleson in view of Zarubin in view of Utsunomiya, and further in view of AAPA.

Based on the discussion above, Applicants request that the rejection under 35 U.S.C. 103(a) be reconsidered and removed and that all the pending claims be passed to allowance.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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Date: 4/16/07

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